

**Amendments to the Claims:**

Claims 1-2, 5, 7-8, and 23-24 are amended.

Claims 33-43 are new.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, are presented. The text of all claims presently under examination is presented below in the listing of claims, and all claims are presented with an appropriate defined status identifier.

**Detailed and Complete Listing of Claims:**

1. (Currently Amended) An isolated DNA selected from the group consisting of:
  - (a) a DNA encoding a protein consisting of an amino acid sequence of SEQ ID NO: 2;
  - (b) a DNA comprising the coding region of a nucleotide sequence of SEQ ID NO: 1;
  - (c) a DNA encoding a protein consisting of the amino acid sequence of SEQ ID NO: 2, wherein 1 to 30 amino acids are substituted, deleted, inserted, and/or added, said protein is a functional equivalent to the protein consisting of the amino acid sequence of SEQ ID NO: 2; and
  - (d) a DNA encoding a protein consisting of an amino acid sequence with 70% or higher homology to SEQ ID NO: 2, wherein said protein is a functional equivalent to the protein consisting of the amino acid sequence of SEQ ID NO: 2; and
  - (e) a DNA that hybridizes with a DNA consisting of the nucleotide sequence of SEQ ID NO: 1 under a washing condition of 1.0x SSCP, 0.1% SDS, at 65°C.
2. (Currently Amended) A vector comprising the DNA of claim 1.
3. (Original) A host cell carrying the vector of claim 2.
4. (Previously Presented) An isolated protein encoded by the DNA of claim 1.
5. (Currently Amended) A method for producing a protein encoded by the DNA of claim 1, which comprises culturing a host cell carrying a vector comprising the DNA of claim 1 ~~is inserted~~, and recovering ~~an expressed~~ the protein encoded by the DNA of claim 1 from said host cells or from a culture supernatant thereof.
6. (Withdrawn) An antibody binding to the protein of claim 4.

7. (Currently Amended) An isolated partial peptide of the protein of claim 4, wherein said partial peptide comprises 8 or more amino acids of the protein of claim 4.

8. (Currently Amended) An isolated ~~nucleotide~~ DNA having a chain length of at least 15 nucleotides, wherein said DNA hybridizes with a DNA consisting of a nucleotide sequence of SEQ ID NO: 1, or a complementary strand thereof, ~~having a chain length of at least 15 bases~~ and wherein hybridization between said two DNAs occurs under a washing condition of 1.0x SSCP, 0.1% SDS, at 65°C.

9. (Previously Presented) A method of screening for a compound that binds to the protein of claim 4, comprising:

(a) exposing a test sample, containing at least one compound, to the protein of claim 4 or a partial peptide thereof; and

(b) selecting a compound that binds to the protein of claim 4 or said partial peptide.

10. (Withdrawn) A compound that binds to a protein encoded by a DNA selected from the group consisting of:

(a) a DNA encoding a protein consisting of the amino acid sequence described in SEQ ID NO: 2 or 4;

(b) a DNA comprising the coding region of the base sequence described in SEQ ID NO: 1 or 3;

(c) a DNA encoding a mutant protein consisting of the amino acid sequence described in SEQ ID NO: 2 or 4 wherein one or more amino acids are substituted, deleted, inserted, and/or added, said mutant protein being a functional equivalent to the protein consisting of the amino acid sequences described in SEQ ID NO: 2 or 4; and

(d) a DNA hybridizing to the DNA consisting of the base sequence described in SEQ ID NO: 1 or 3, and encoding a protein that is a functional equivalent of the protein consisting of the amino acid sequence described in SEQ ID NO: 2 or 4,

wherein said compound can be isolated using the method of claim 9.

11. (Withdrawn) The isolated compound of claim 10, wherein said compound is a naturally occurring compound.
12. (Withdrawn) The compound of claim 10, wherein said compound is a ligand, an agonist or an antagonist.
13. (Previously Presented) The DNA of claim 1, wherein said DNA encodes a protein consisting of an amino acid sequence that has 1 to 15 amino acids substituted, deleted, inserted, and/or added from SEQ ID NO: 2, and wherein said protein is a functional equivalent to a protein consisting of an amino acid sequence of SEQ ID NO: 2.
14. (Previously Presented) The DNA of claim 1, wherein said DNA encodes a protein consisting of an amino acid sequence that has 1 to 5 amino acids substituted, deleted, inserted, and/or added from SEQ ID NO: 2, and wherein said protein is a functional equivalent to a protein consisting of an amino acid sequence of SEQ ID NO: 2.
15. (Previously Presented) The DNA of claim 1, wherein said DNA encodes a protein consisting of an amino acid sequence with 80% or higher homology to SEQ ID NO: 2, and wherein said protein is a functional equivalent to a protein consisting of an amino acid sequence of SEQ ID NO: 2.
16. (Previously Presented) The DNA of claim 1, wherein said DNA encodes a protein consisting of an amino acid sequence with 95% or higher homology to SEQ ID NO: 2, and wherein said protein is a functional equivalent to a protein consisting of an amino acid sequence of SEQ ID NO: 2.
17. (Previously Presented) The DNA of claim 1, wherein said DNA hybridizes to a DNA consisting of a nucleotide sequence of SEQ ID NO: 1 under a washing condition of 1.0x SSCP, 0.1% SDS at 65°C, wherein said DNA encodes a protein that is a functional equivalent of a protein consisting of an amino acid sequence of SEQ ID NO: 2.

18. (Previously Presented) The method of claim 5, wherein said DNA encodes a protein consisting of an amino acid sequence that has 1 to 15 amino acids substituted, deleted, inserted, and/or added from SEQ ID NO: 2, and wherein said protein is a functional equivalent to a protein consisting of an amino acid sequence of SEQ ID NO: 2.

19. (Previously Presented) The method of claim 5, wherein said DNA encodes a protein consisting of an amino acid sequence that has one to 5 amino acids substituted, deleted, inserted, and/or added from SEQ ID NO: 2, and wherein said protein is a functional equivalent to a protein consisting of an amino acid sequence of SEQ ID NO: 2.

20. (Previously Presented) The method of claim 5, wherein said DNA encodes a protein consisting of an amino acid sequence with 80% or higher homology to SEQ ID NO: 2, and wherein said protein is a functional equivalent to a protein consisting of an amino acid sequence of SEQ ID NO: 2.

21. (Previously Presented) The method of claim 5, wherein said DNA encodes a protein consisting of an amino acid sequence with 95% or higher homology to SEQ ID NO: 2, and wherein said protein is a functional equivalent to a protein consisting of an amino acid sequence of SEQ ID NO: 2.

22. (Previously Presented) The method of claim 5, wherein said DNA hybridizes to a DNA consisting of a nucleotide sequence of SEQ ID NO: 1 under a washing condition of 1.0x SSCP, 0.1% SDS at 65°C, and wherein said DNA encodes a protein that is a functional equivalent of a protein consisting of an amino acid sequence of SEQ ID NO: 2.

23. (Currently Amended) The isolated partial peptide of claim 7, wherein said partial peptide comprises 15 or more amino acids.

24. (Currently Amended) The isolated partial peptide of claim 7, wherein said partial peptide comprises 50 or more amino acids.

25. (Withdrawn) A isolated DNA selected from the group consisting of:

(a) a DNA encoding a protein consisting of an amino acid sequence of SEQ ID NO: 4, wherein said protein is a soluble-type cytokine receptor;

(b) a DNA comprising the coding region of a nucleotide sequence of SEQ ID NO: 3;

(c) a DNA encoding a protein consisting of the amino acid sequence of SEQ ID NO: 4, wherein 1 to 30 amino acids are substituted, deleted, inserted, and/or added, said protein is a functional equivalent to the protein consisting of the amino acid sequence of SEQ ID NO: 4; and

(d) a DNA encoding a protein consisting of an amino acid sequence with 70% or higher homology to SEQ ID NO: 4, wherein said protein is a functional equivalent to the protein consisting of an amino acid sequence of SEQ ID NO: 4.

26. (Withdrawn) A vector, comprising the DNA of claim 25.

27. (Withdrawn) A host cell carrying the vector of claim 26.

28. (Withdrawn) An isolated protein encoded by the DNA of claim 25.

29. (Withdrawn) A method for producing a protein encoded by the DNA of claim 25, which comprises:

culturing a host cell carrying a vector comprising the DNA of claim 25, and

recovering an expressed protein from said host cells or from a culture supernatant thereof.

30. (Withdrawn) A partial peptide of the protein of claim 28, wherein said partial peptide comprises 8 or more amino acids of the protein of claim 28.

31. (Withdrawn) A nucleotide that hybridizes with a DNA consisting of a nucleotide sequence of SEQ ID NO: 3, or a complementary strand thereof, having a chain length of at least 15 bases.

32. (Withdrawn) A method of screening for a compound that binds to the protein of claim 28, comprising:

(a) exposing a test sample, containing at least one compound, to the protein of claim 4 or a partial peptide thereof, and

(b) selecting a compound that binds to a protein encoded by an isolated DNA selected from the group consisting of:

(1) a DNA encoding a protein consisting of an amino acid sequence of SEQ ID NO: 4, wherein said protein is a soluble-type cytokine receptor;

(2) a DNA comprising the coding region of a nucleotide sequence of SEQ ID NO: 3;

(3) a DNA encoding a protein consisting of the amino acid sequence of SEQ ID NO: 4, wherein 1 to 30 amino acids are substituted, deleted, inserted, and/or added, said protein is a functional equivalent to the protein consisting of the amino acid sequence of SEQ ID NO: 4; and

(4) a DNA encoding a protein consisting of an amino acid sequence with 70% or higher homology to SEQ ID NO: 4, wherein said protein is a functional equivalent to the protein consisting of an amino acid sequence of SEQ ID NO: 4

or a partial peptide thereof.

33. (New ) The isolated DNA of claim 1, wherein the isolated DNA encodes a protein consisting of the amino acid sequence of SEQ ID NO:2.
34. (New ) The isolated DNA of claim 33, wherein the isolated DNA comprises the polynucleotide sequence of SEQ ID NO:1.
35. (New ) An isolated protein encoded by the DNA of claim 33.
36. (New ) The isolated DNA of claim 1, wherein the DNA encodes a protein consisting of amino acid sequence of SEQ ID NO: 2 or a mutant thereof having 30 or fewer conservative amino acid substitutions.
37. (New) The partial peptide of claim 7, wherein the partial peptide comprises a region selected from the group consisting of: the protein of claim 4 without a signal sequence, the protein of claim 4 without an intracellular region; an extracellular region; a transmembrane region; and a membrane proximal region.
38. (New) The partial peptide of claim 37, wherein the partial peptide comprises an extracellular region.
39. (New) An isolated DNA encoding the isolated partial protein of claim 7.
40. (New) An isolated fusion protein comprising the protein of claim 4 fused to another peptide or protein.
41. (New) An isolated fusion protein comprising the partial peptide of claim 7 fused to another peptide or protein.
42. (New) An isolated DNA encoding the fusion protein of claim 40.
43. (New) An isolated DNA encoding the fusion protein of claim 41.